

**REMARKS**

The Examiner has required an election in the present application between:

Species a), illustrated by claim 6;  
Species b), illustrated by claim 10;  
Species c), illustrated by claim 11; and  
Species d), illustrated by claim 12.

For the purpose of examination of the present application, Applicants elect Species b), illustrated by claim 10 with traverse for the following reasons.

First, although the Examiner separates species a) and b) based on the type of firing material, Applicants submit that a firing material having the same or different physical property is not a basis for a species election. Thus, Applicants respectfully request, at the very least, rejoinder of species a) and b).

Second, Applicants respectfully traverse the Examiner's application of unity of invention.

All of the claims as presently recited are based upon a single general inventive concept under PCT Rule 13.1. The PCT administrative authority has already considered the present invention to possess unity, and to directly contest this consideration by the PCT administrative authority is improper.

Third, the Examiner refers to PCT Rule 13.2 and states that claim 1 is either obvious or anticipated by Oyama et al. (EP 0530370 A1;

hereinafter EP '370) or Kallenbach et al. (EP 0583620 A1; hereinafter EP '620). However, Applicants traverse this statement and believe restriction is still inappropriate.

Applicants note the claims that Applicants are hereby referring to are with regard to amended sheets of PCT/EP00/00909.

As claimed, the supports are not coated with metal, nor are they composed of metal molten at the sinter temperature (i.e., see claim 1).

Claim 1 reads:

"A process for the dimensionally-true sintering of ceramic pre-shaped items, said process comprising resting a firing material during the sintering on supports not coated with metal or consisting of metal molten at the sinter temperature, which adapt independently to the shrinkage dimensions which occur during the firing process or allow a contact-free support of the pre-shaped items."

With regard to the pending claims and the EP '370 reference, EP '370 does not disclose, teach or suggest all features of the instantly claimed processes. In fact, the EP '370 reference does not teach or suggest any solution to the problem of dimensionless sintering, whereas the presently claimed processes do solve this problem.

With regard to the EP '620 reference, this reference merely describes the state of the art, where the state of the art includes many drawbacks.

For example, the use of powder fills in EP '620 results in sinter necks that restrict the free mobility of the product to be sintered. The supports in the present invention are solid supports and not powdery fill materials, as in EP '620.

In addition, the formation of sinter necks in the fill results in an immobilization of the granular fill (one drawback). In EP '620, the sinter process is even impeded as a differing temperature and time behavior of the shrinkage process between fill and applied or embedded component, in particular with cavities in the component, leads to deformations of the components (another drawback).

In contrast, the presently claimed processes avoid those drawbacks as those exemplified by the EP '620 reference.

In other words, the present invention does contribute special technical features over the cited references.

To avoid any misunderstandings between Applicants' statements and disclosure in the specification, Applicants describe a version of the claimed processes as a very thin fill that is present between the negative mould and the object to be sintered (see specification at page 9, starting at line 7; see paragraph bridging pages 7-8 of German version). This represents an exception, as here the support function is fulfilled by the negative mould, and in such a way that a uniform support is achieved in the total region of the support of the object to be sintered and support obtained overall. The negative effects that are otherwise to be taken into account with powder fills surprisingly do not occur in this version due to the very thin fill and the uniform distance of object and support and the accompanying uniform support of the object. Rather, with this version, the independent adaptation of the supporting material to the shrinkage dimensions (which occur during the

firing process) is involved. The actual support, namely the negative mould, is subject to the same shrinkage behavior.

Thus, based on the above remarks, Applicants respectfully traverse the Examiner's statements that claim 1 is obvious or anticipated by EP '370 or EP '620.

There is also no undue burden on the Examiner to search the classified species because the reasons for the restriction requirement are based on PCT Rules 13.1 and 13.2; however, the presently pending claims have at least one special technical feature that contributes over the cited references (as explained above). Thus, there is no undue burden to search the classified species when the species cannot be separately classified due to the presence of a single general inventive concept under PCT Rule 13.1.

The unity of invention under PCT Rule 13 especially holds true for claims 6 and 10 because both claims incorporate at least one special technical feature that is distinguishable from the cited references. Claim 6 is directed to a process for sintering involving the same physical properties between the supports and firing materials, whereby these properties are different for the process of claim 10. Both of these claims contribute over the cited references because each claim incorporates supports instead of powdery fill materials, and each is directed to a process for dimensionally-true sintering of ceramic pre-shaped items. Thus, Applicants respectfully submit that the embodiments of claims 6 and 10 are in unity.

As acknowledged by the Examiner, at least claims 1-5 and 13 are generic (Office Action, page 3). The status of claims 7-9 has not been mentioned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

**Attached hereto is a marked-up version of the changes made to the application by this Amendment.**

Pursuant to 37 C.F.R. § 1.17 and 1.136(a), Applicants respectfully petition a one (1) month extension of time for filing a response in connection with the present application. The required fee of \$110.00 is attached hereto.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 

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Attachment: Marked-up Version Showing Changes Made

MARKED-UP VERSION SHOWING CHANGES MADE

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Amended) [Process] A process for the dimensionally-true sintering of ceramic pre-shaped items, said process comprising  
resting a [the] firing material [resting] during the sintering on [supporting materials,] supports not coated with [metal,] metal or consisting of metal molten at the sinter temperature, which adapt independently to the shrinkage dimensions which occur during the firing process or allow a contact-free support of the pre-shaped items.

10. (Amended) Process according to claim 1 or 2, the firing material resting on [supporting material] supports which has very different physical properties to the firing material itself, [where a] wherein there is no contamination or bonding of the firing material with the [supporting material must not be possible.] supports.